

**BIOLOGICAL INDICATOR FOR STERILIZATION
PROCESSES WITH DOUBLE BUFFER SYSTEM**

Abstract of the Disclosure

A method and an apparatus for preventing reversion of the color of an indicator
5 dye in a biological indicator is disclosed. The indicator dye changes color if viable
microorganisms are present after sterilization, because acidic byproducts are formed
when the microorganisms metabolize the growth medium. It has been found that the
dye can change color back to the original color after the completion of the sterilization
10 due to leaching or diffusion of basic impurities into the growth medium. The method
and the apparatus employ a dual buffer system with one buffer which operates at high
pH to moderate pH fluctuations at the start of the sterilization and a second buffer which
operates at low pH to minimize pH fluctuations after the sterilization is complete. Less
high pH buffer than low pH buffer is used in order to maximize the speed and
sensitivity of the biological indicator.

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